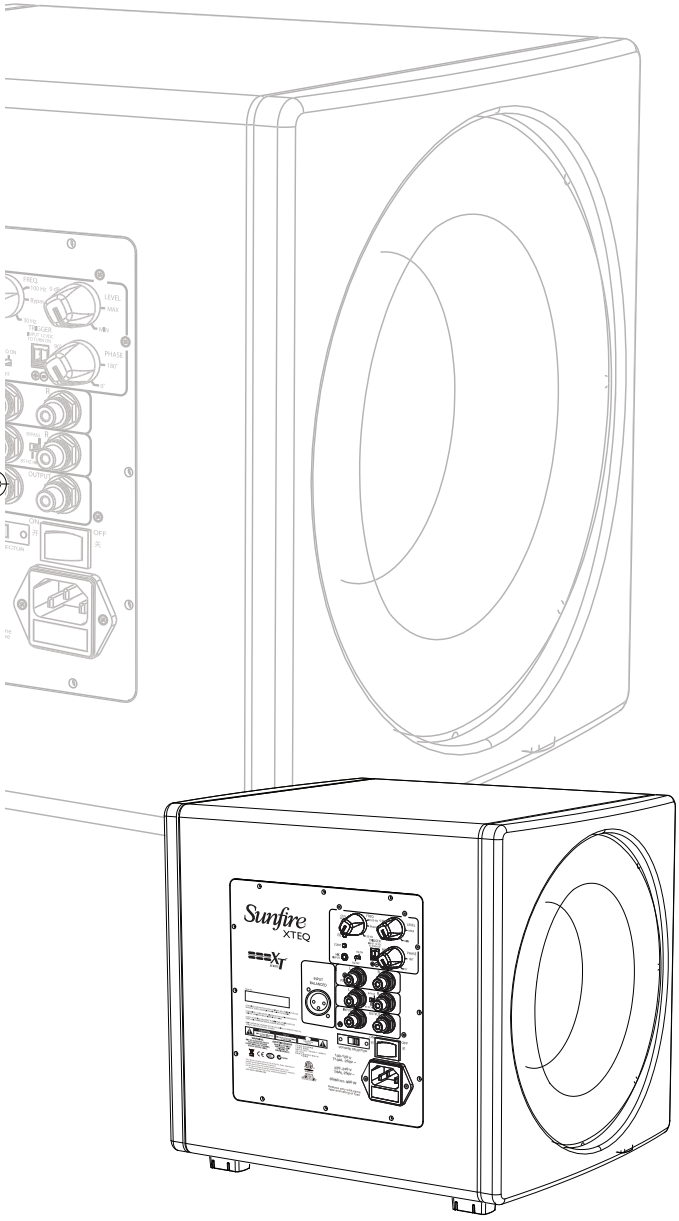
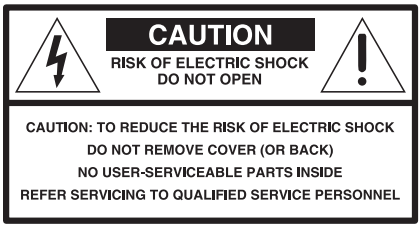
Sunfire®

XT™ SERIES

Subwoofer



XTEQ 8
XTEQ 10
XTEQ 12
User's Manual


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Le symbole de l'éclair fléché dans un triangle équilatéral, est destiné à alerter l'utilisateur de la présence d'une "tension dangereuse" dans le boîtier du produit qui peuvent être des ampleur suffisante pour constituer un risque d'électrocution aux personnes.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Ce symbole est destiné à alerter l'utilisateur de la présence d'opération et de maintenance (entretien) dans la documentation accompagnant l'appareil.

Important Safety Instructions

1. Read these Instructions.
   Lisez et suivez ces instructions.
2. Keep these instructions.
   Conservez ces instructions.
3. Heed all Warnings.
   Respectez tous les avertissements.
4. Follow all instructions.
   Suivez toutes les instructions.
5. Do not use this apparatus near water.
   Ne pas utiliser cet appareil près de l'eau.
6. Clean only with a dry cloth.
   Nettoyer uniquement avec un chiffon sec.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
   Ne pas bloquer les ouvertures de ventilation. Installer conformément aux instructions du fabricant.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
   Ne pas installer près de sources de chaleur telles que radiateurs, registres de chaleur, poêles ou autres appareils (y compris les amplificateurs) produisant de la chaleur.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
   Ne détruisez pas la sécurité de la terre ou polarisées - fiche. Une fiche polarisée possède deux lames dont une est plus large que l'autre. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour remplacer la prise obsolète.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
    Protégez le cordon d'alimentation d'être piétiné ou pincé, particulièrement au niveau des fiches, des prises, et le point où ils sortent de l'appareil.
11. Only use attachments/accessories specified by the manufacturer.
    N'utilisez que des accessoires specifies par le fabricant.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

    Utilisez uniquement un chariot, stand, trépied, support ou table spécifiés par le fabricant ou vendu avec l'appareil. Quand un panier ou rack est utilisé, faites attention lorsque vous déplacez l'ensemble chariot / appareil, pour éviter d'éventuelles blessures en cas de chute.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
    Débranchez cet appareil pendant les orages ou lorsqu'il n'est pas utilize pendant de longues périodes de temps.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects

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have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. *Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque façon que ce cordon d'alimentation ou la fiche est endommagé, liquide a été renversé ou des objets sont tombés dans l'appareil, l'appareil a été exposé à la pluie ou à l'humidité, ne fonctionne pas normalement, ou s'il est tombé.*

15. The mains plug (appliance coupler) is used as the disconnect device, the disconnect device shall remain accessible and operable at all times.
La fiche d'alimentation (appareil coupleur) est utilisé comme dispositif de déconnexion, le dispositif de déconnexion doit rester facilement accessible.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
Pour déconnecter complètement cet appareil du secteur, débranchez le cordon d'alimentation de la prise murale.
17. Open flame sources, such as lighted candles, should NOT be placed on the apparatus.
Aucene source de flamme nue, telle que des bougies allumées, ne doit être placé sur l'appareil.
18. The apparatus should be connected to a main socket outlet with a protective earthing connection.
Borne de terre de protection. L'appareil doit être connecté à une prise secteur avec une prise de terre.

FCC Required Text:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate, radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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To find out more about this and other Sunfire products, please visit our website: ***www.sunfire.com***

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Introduction

Thank you for purchasing this Sunfire XTEQ Subwoofer. The big breakthrough features of the subwoofer are its innovate tracking down converter amplifier, its long throw, high back-electromotive force driver, and its fully automatic room equalizer. Taken together, these unique features provide this subwoofer with as much bass as you would get from several 15 inch drivers mounted in a cabinet the size of a small refrigerator.

Unpacking

Your Sunfire Subwoofer should reach you in perfect condition. If you do notice any shipping damage, please contact your Sunfire Dealer immediately. Gently lift out the unit and remove all the packing material. It is important to save all the packing materials and the box in case your subwoofer ever needs to be moved or shipped for repair.

Make sure that you keep your sales receipt. It is the only way to establish the duration of your Limited Warranty and it may come in useful for insurance purposes.

Please take a moment to record the serial number, place of purchase and purchase date on the following card so that you may keep this information with your packaging should you need to refer back to it at a later time.

Serial Number: _____

Purchased from: _____

_____

_____

Date: _____

Care

To maintain the speaker cabinet's finish, first unplug the power cord and then use a soft cloth to clean the surfaces. If your Sunfire Subwoofer needs servicing, please read the Troubleshooting section of this document.

If a problem persists, contact your nearest authorized Sunfire Dealer or Sunfire Technical Support at:
Toll Free: 800.622.3526
Email: techsupport@sunfire.com
Web: http://sunfire.com/support.asp

What's included

1 XTEQ subwoofer
1 US STD IEC line cord
1 Microphone with cable
1 Microphone stand

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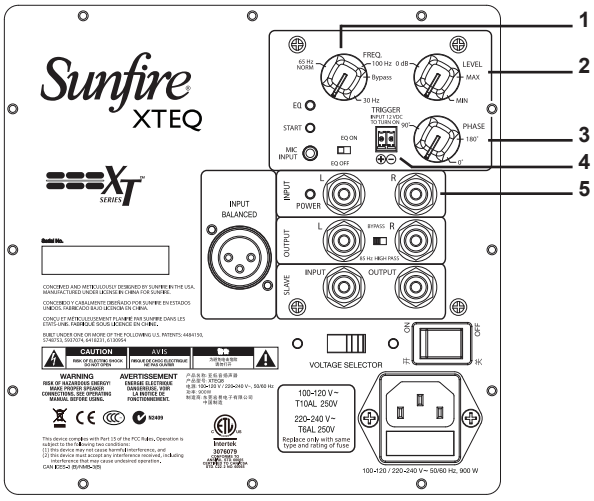
Control Panel Features



1. Crossover Frequency

This control changes the high frequency cutoff point. With the control set to 100 Hz, the subwoofer will reproduce frequencies up to 100 Hz. If the control is set fully clockwise, the crossover is bypassed and the subwoofer will reproduce a wide frequency range. With the control fully counter-clockwise the subwoofer reproduces a narrow range, up to 30 Hz.

Rotate the control until the bass sounds natural. If the mid-bass sounds natural but you want more low bass, turn this control down a little, then turn the Level control up by about the same amount. This increases the low-bass output while leaving the mid-bass output the same.

2. Level

This control lets you match the output level of the subwoofer to the level of your other speakers. The subwoofer output will increase as this control is rotated clockwise. When you initially install this subwoofer in your system, turn this down before turning on your subwoofer. This will prevent any loud surprises.

3. Phase Control

This control changes the relative phase of the subwoofer with respect to the other speakers. Use this control to help blend the subwoofer with the rest of the system. This is accomplished by adjusting the control in small increments as you listen for the most bass at your listening position. As a final trim, readjust the Crossover Frequency and volume controls after the Phase has been set.

4. Trigger Input

The trigger input can be used to automatically turn on the subwoofer from Standby mode. To do this, connect +12 VDC to the positive (+) terminal, and ground to the negative (–) terminal. Many of the currently available high quality Home Theater Receivers and Preamplifiers have matching12 VDC Trigger outputs. When they are turned on, the subwoofer will “be triggered” to turn on.

5. Line Level Inputs

Connect these unbalanced inputs with RCA type patch cords to the line level outputs of your receiver or preamp. If your preamplifier or receiver has a single sub/LFE output, connect it to either input jack.

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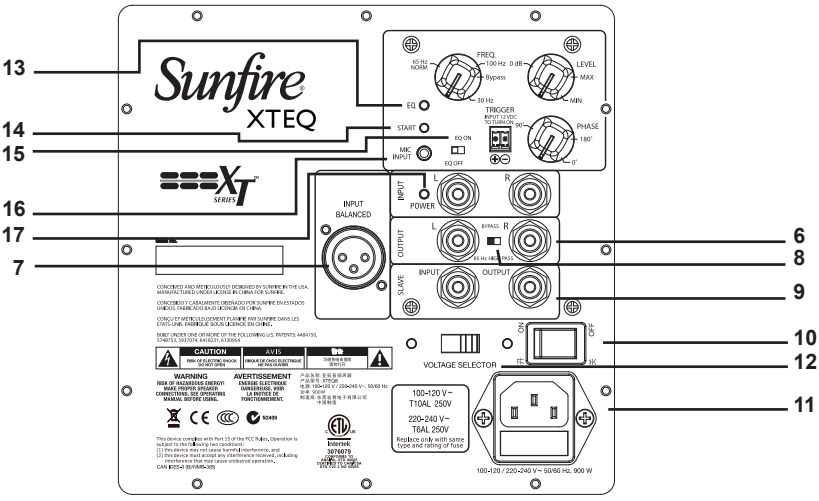
Control Panel Features Continued



6. Line Level Outputs

Line level output signals are available at these jacks. These outputs are active whenever a signal is hooked up to the inputs of the subwoofer. The outputs are not affected by the volume level, phase, frequency control, or EQ of the subwoofer.

To use the outputs, connect the preamp outputs on your preamp receiver to the subwoofers line level inputs using good-quality RCA type patch cords. Then connect a second set of patch cords from the subwoofer outputs to the line level inputs of your main amplifier. The adjacent output switch (7) allows the outputs to be either high pass, or full range.

7. Balanced (XLR) Input

Use this balanced input to connect to the XLR balanced connection line-level output on select Home Theater preamplifiers or other sources.

Balanced connections offer superior noise cancellation over unbalanced type connections.

8. Output Switch

This switch affects the frequency range of the line level outputs.
In the bypass position, the outputs are a full range copy of the input signals.

In the 85 Hz position, the outputs are a copy of the input signals with the frequencies below 85 Hz removed. We recommend using this position if your speakers are not designed to reproduce low frequencies.

If your main speakers are capable of operating at full frequency range (20Hz to 20kHz), then use the bypass position.

9. Slave Input and Output

These connections simplify the hook up and operation of two XTEQ subwoofers.

Connect the Slave output from the first subwoofer to the slave input of the second. The second subwoofer will then receive the optimum audio signals from the first, and there is no need to adjust the controls of the second subwoofer, as the audio is controlled by the controls and EQ setting up the first.

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The second subwoofer will not require any connections to its line level inputs, as it receives the audio through its slave input.

10. Power Switch

The power switch is used for installing and uninstalling the subwoofer, and for power conservation during long vacations. Leave it switched on at all times for normal operation.

After a period of inactivity, i.e. with no input signal, the subwoofer will automatically turn itself to standby mode, where it is effectively muted. It can turn back on automatically when an input signal is applied, or if a 12 VDC trigger voltage is applied to the trigger inputs, or if the start button is pressed.

11. IEC Line Cord Socket and Fuseholder

The subwoofer comes with a detachable line cord that connects here. Be sure to use the linecord approved for your region / location.

The subwoofer is supplied with a conservative slow blow type fuse to protect the electronics.

Always unplug the power cord before inspecting or changing the fuse. Never use a fuse with a larger current rating than shown on the markings next to the fuseholder.

12. Line Voltage Selector Switch

This switch allows the subwoofer to be set to the local region AC mains voltage. The AC voltage option has been factory configured for 100~120v. Should the AC voltage need to be changed to 220~240v, please complete the following steps:

Always unplug the power cord and all other connections, before moving this switch. Loosen the screw on the protective cover, slide the cover away and the slide switch can be adjusted. Make sure to replace the protective cover when done.

ONLY MAKE THIS ADJUSTMENT IF THE SUBWOOFER WILL BE CONNECTED TO A VOLTAGE SUPPLY OF BETWEEN 220~240VAC @50Hz.

Incorrect setting of this switch can cause catastrophic circuit failure.

13. EQ LED

This LED provides feedback during the Room EQ procedure. It also lights continuously whenever the subwoofer is not in standby.

14. Start Button

Used to initiate the automatic Room EQ procedure. See page 12 for complete details on the Room EQ procedure.

15. EQ On/Off Switch

This switch is used to turn the EQ on or off. It allows you to easily judge the effect of the EQ on the subwoofer performance.

16. Microphone Input

This is the input connection for the supplied linear measurement microphone used during the automatic EQ calibration procedure.

17. Power LED

This red LED indicates when the subwoofer is connected to AC power. When a 12 V trigger voltage or an audio signal is applied, this LED goes out and the blue EQ LED lights up.

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Installation

Observe the following general precautions and read the safety instructions on pages two and three before using your Sunfire subwoofer.

- Never open the cabinet or remove the middle Control Panel as this might result in electrical shock to you or damage to the unit.
- Protect it from prolonged exposure to direct sunlight and other direct sources of heat, such as heating vents and radiators.
- To prevent fire or shock do not expose the unit to rain or moisture. If fluid or a foreign object should enter the unit, immediately turn off the power and contact your Sunfire dealer.
- Avoid excessive exposure to extreme cold or dust.
- Do not place heavy objects on top of the unit.
- Do not place the subwoofer with its control panel against the floor.
- To move the subwoofer along the floor, rotate it onto one edge on a plastic sheet or bag and it will slide along easier.

Heat Rise

- Allow adequate ventilation around the middle control panel of the subwoofer.
- Do not let anything come into contact with the panel and keep at least 2 inches away from any walls.
- The metal bottom plate serves as the amplifier heat sink and also as a conduit to remove internal heat to the outside.

AC Power Considerations

- Ensure that the unit is plugged into an outlet capable of supplying the correct voltage and amperage specified for your model.

  US (120 VAC) Model – The outlet must have a circuit rating of 8 amps or more (a typical home circuit is rated at 15 amps).

  EURO (240 VAC) Model – The outlet must have a circuit rating of 6 amps of more.
- Unplug your sub woofer's power cord from the electrical outlet if it will be left unused for a long period of time.
- Route the power supply cord so it is not likely to be walked on or pinched by items placed upon or against it, especially at plugs, convenience receptacles, and the point where it exits from the unit.

Magnetic Fields

- We recommend that you place your subwoofer further than 2 feet away from other electronic products that may be susceptible to magnetic fields so the speaker magnet won't damage your existing devices. Examples of such items; video and/or audio magnetic tape, computer and/or DVR type memory storage drives, including USB, Compact Flash, SD Cards, etc. . .

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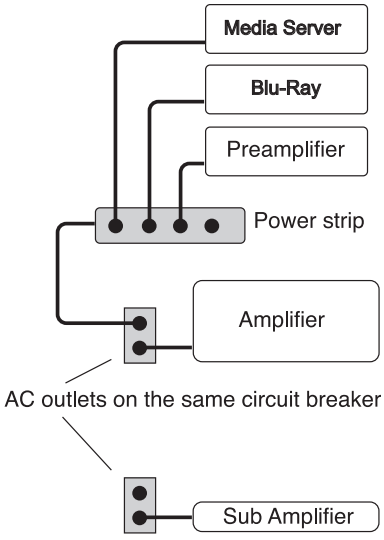
Connections

Please consider the following when setting up your new system:

- Before making or changing any connections, always make sure that the subwoofer and your other components are turned off. Also turn down the volume control of the subwoofer and your preamplifier or receiver.
- This diagram shows all of the low-power components sharing a power strip which is connected to the same outlet by the amplifier.



- The subwoofer is connected to an outlet on the same circuit breaker, provided that the total system current draw does not exceed the breaker current rating.
- This arrangement will reduce the possibility of an audible hum in your system caused by a ground loop.
- Whenever possible, keep the power cords away from the signal cables or speaker wires to prevent any hum or interference being heard in the speakers.
- Choose reliable high-quality interconnect cables, also called patch cords or RCA cables. They should be fully shielded and as short as possible for the job. The longest cable in your system will likely be to the subwoofer, so choose a good quality brand.
- Some patch cords can be a very tight fit and there is usually a preferred method of getting them on and off. Some have to be removed with a twisting action. Be gentle or you may damage the jacks of the subwoofer or your other components.

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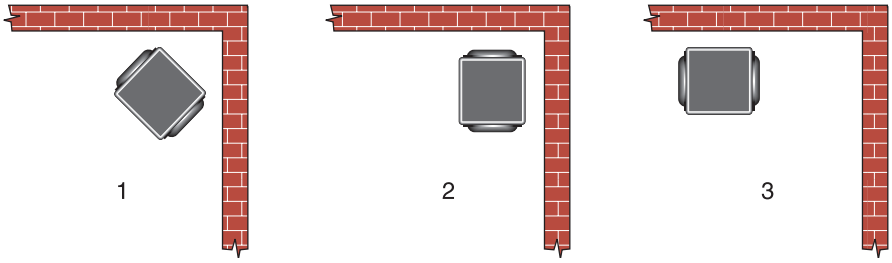
Location



Your subwoofer is designed / optimized to be placed in a room corner on the diagonal (corner loading), but can also be optimized for other room option placements.

The following are additional recommendations that Sunfire has found to be beneficial in finding the prime location for your subwoofer:

- Experiment with at least two places and decide which is the best for your enviroment:
    - Start by placing the subwoofer right on the seat of your favorite couch or easy chair. Take care to position it so it is not likely to fall off.
    - If you are using the subwoofer as part of a home theater system, you can either run a calibration test signal through the subwoofer, or simply plug the analog outputs of a CD/DVD/Blu-Ray player directly into the subwoofer's line level inputs. Turn down the subwoofer's volume level before turning on the audio source, then play some of your favorite music samples with heavy bass.
- Walk around the room, listening, and stand in all the positions where you might be able to place the subwoofer. Try crouching down, and try the corners. Find a place for the subwoofer where the bass output sounds the loudest.
- Shut things down and install the subwoofer in this position. Make sure the control panel is not touching anything, and that it can receive good ventilation.
- Although low frequencies are non-directional, factors such as room reflections, standing waves, resonance and absorption will strongly affect your subwoofer's performance. Moving the subwoofer from one location to another can have a major effect on the bass response.
- The auto EQ mode will let you adjust for the room effects, but you should find the best location first.

Remember to keep the subwoofer at least two or 3 feet away from other electronics that may be negatively impacted by strong magnetic fields. This will reduce the chance of the magnetic fields upsetting or erasing your magnetic media.

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Using Two Subwoofers

- If you wish to use two subwoofers, the sound output will double - an increase of 3 DB. Locate the subwoofers with one in each corner and experiment with the location and phase control to achieve the best bass response. With two subwoofers you'll experience more balanced bass and fewer high and low spots.

- Use the slave input and output connections if you are using two XTEQ subwoofers.

Now that you have found a proper location in your room for your subwoofer(s), it is time to perform the Room Equalization Procedure to maximize your subwoofer(s) full potential. The Sunfire XTEQ unitizes the most current and advanced auto equalization system available.

As you found in the last exercise, 'Location', subwoofer performance is greatly affected by the room in which it is situated, and the positioning within the room. The “Room Effects” will boost and cut the output levels reaching your listening position. This gives a “Room EQ” effect which can often be far from wonderful.

The Sunfire XTEQ can automatically adjust for the effects of Room EQ. The XTEQ will measure the actual room frequency response using the supplied measurement microphone and on-board processor test tone generator. After “listening” to the room at many different key subwoofer frequencies, the XTEQ then automatically compensates for peaks or dips and smooths out the subwoofer(s) response to maximize your entertainment enjoyment.

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Room Equalization Procedure

Instructions for Auto EQ:

- Plug in the XTEQ and turn on the power using the power switch on the back panel of the system.
- Please make sure that the microphone (supplied) is attached through the microphone input in the back panel of the box.
- The power indicator will turn red and confirm that it is “on”.
- In order to continue with the Auto EQ process, you’ll have to take the system out of standby mode.
- To do so, press the start button again.
- The Power LED indicator should turn off.

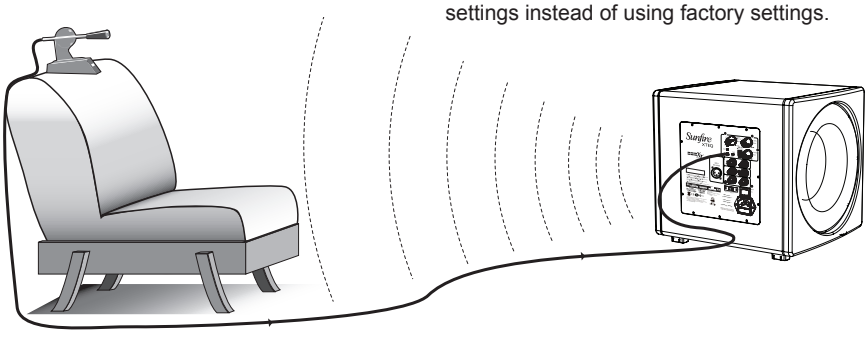
To Launch the Auto EQ Process:

- Push start.
- The LED indicator will turn blue in color.
- The system will generate a set of tones and will automatically adjust the proper level at four seperate frequencies. (The four frequencies are 35Hz, 49Hz, 64Hz, 84Hz.)
- When finished the blue light will turn off.

To utilize effectively, please follow the steps outlined below:

1. Install the subwoofer in the best location for your room (see previous section).
2. The calibration must be done while the listening room is quiet. Please turn off any noisy machinery, including heating or cooling systems during this process.
3. Place the microphone in the listening position (on the couch, for example), pointing in the direction you’ll normally be facing while listening to your system. Only use the microphone supplied by Sunfire for this process.
4. Plug the microphone into the subwoofer’s microphone jack (MIC Input) located on its back panel.
5. Back panel controls and connections should be set as the following:
   a. Nothing should be connected to any of the Input connection terminals (Left / Right or XLR)
   b. Level should be set to “0” dB.
   c. Crossover should be set to “Bypass”.
   d. Phase should be set to “0”.
   e. EQ ON/OFF should be switched to “ON”.

When configuring Auto or Manual EQ, positioning the Auto EQ button to “on” will enable you to create your own preferred settings instead of using factory settings.



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- When you are finished, you may remove the microphone from the mic input.
- Leave the Auto EQ switch in the “EQ On” position to use the settings that you just configured. If at any time you’d like to default to factory settings, turn the Auto EQ switch to “EQ off.”

To Manually Adjust EQ:

Should you wish, you may also manually adjust the level of the 4 seperate frequency tones (35Hz, 49Hz, 64Hz, 84Hz) by following these steps:

- Plug in the XTEQ and turn on the power using the power switch on the back panel of the system.
- The power indicator will turn red and confirm that it is “on”.
- Hold the start button for 5 seconds.
- A tone will be heard.
- You can now manually adjust the volume level for that given frequency tone.
- Then, push the start button and it will store that level for that frequency.
- Press start again, and you will move on to the next frequency tone and follow the same steps four times at the four different frequencie tones.
- When all frequencies have been adjusted to your liking, press and hold the start button until the unit shuts off.
- Leave the Auto EQ switch in the “EQ on” position to use the settings that you just configured. If at any time you’d like to default to factory settings, turn the Auto EQ switch to “EQ off.”

If I am using two XTEQ subwoofers, What is the procedure for the Room Equalization?

1. If you are using two XTEQ subwoofers, make sure that they are connected using the SLAVE output of the first sub to the SLAVE input of the second.
2. Back panel connections and controls should be set to the following on the 'slave' subwoofer:
   a. Nothing should be connected to any of the Input connection terminals (Left / Right or XLR).
   b. Level should be set to “0” dB.
   c. Crossover should be set to “Bypass”.
   d. Phase should be set to “0”.
   e. EQ ON/OFF should be switched to “ON”.
3. Connect the microphone to the primary unit only.
4. Follow the procedure for Room Equalization for one subwoofer (shown above). The EQ room measurement will take into account the sound from both subwoofers, and the EQ adjustment will affect both subwoofers.

My AV Receiver has an Auto Calibration and microphone procedure with its set-up process. Which EQ / Calibration system should I use?

Sunfire recommends that you use BOTH – the Sunfire Auto Room Equalization AND your AV receiver’s Auto Calibration System. For optimum performance, start with the Sunfire Auto Room Equalization procedure. Then make your connection between the Sunfire XTEQ and your AV Receiver. Then follow the AV Receiver’s instructions for its Auto Calibration System.Using this alignment of steps ensures that the XTEQ is first EQ’d to your room and then calibrates all of your speakers including the XTEQ to maximize your experience.

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System Configurations

The following pages show some typical connections that you might make in your installation. They show how the inputs and outputs of the Sunfire Subwoofer are connected to your preamplifier or AV receiver.

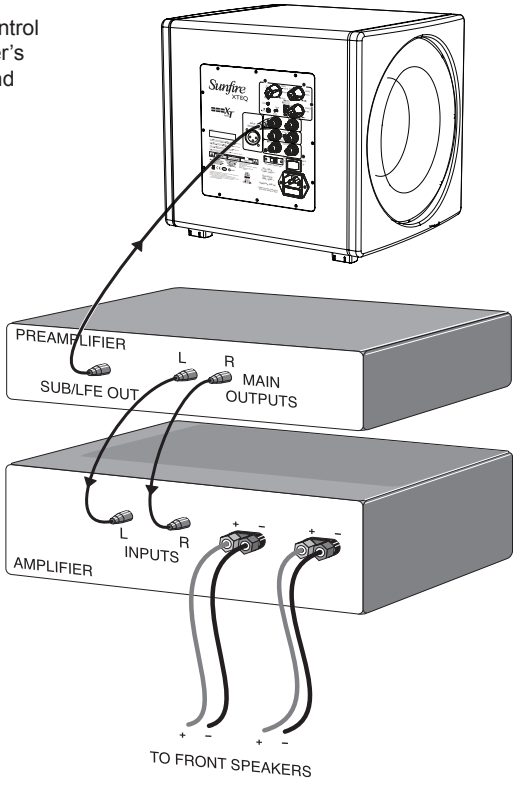
Connections to a Preamplifier's Subwoofer Output

If your AV Receiver / Preamplifier has a subwoofer output (often labeled LFE for Low Frequency Effects), it can be connected to the subwoofer's left or right input as shown. This is the simplest and recommended connection. An AV Receiver with a sub/LFE output can be connected in the same way.

The subwoofer will play the low frequency range and the other speakers will play the frequency range delivered to them by your amplifier.

Your AV Receiver / Preamplifier may have an independent subwoofer volume control. Make sure this is correctly adjusted, and that the Sunfire Subwoofer's crossover frequency is set to 100 Hz. This is by no means an ironclad rule, rather it is a good starting point. (Refer to the crossover frequency control details within this document, as well as your AV Receiver / Preamplifier User's Manual.)

You can set the subwoofer's level control to 0 dB, and then use the preamplifier's subwoofer level control for normal and routine adjustments.



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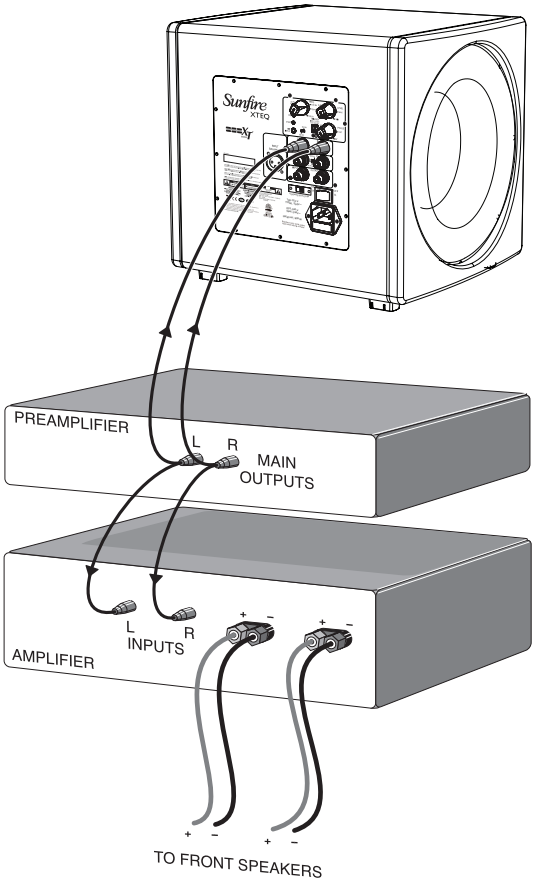
Connections to a Preamplifier Using "Y" Cables

If your preamplifier does not have a dedicated sub/LFE output, you can use “Y” cables to send its main outputs to both the subwoofer and your amplifier.

The subwoofer will play the low frequency range and your front speakers will play the full range. Although bass is commonly distributed evenly between left and right channels (L+R bass), movie soundtracks often contain differential (L-R) bass. The opening scene in “Transformers”, for example, has loads of L-R bass information. If this is not preserved, the bass in these scenes sounds anemic. Therefore, systems which do not have a dedicated sub/LFE output should use both the left and the right inputs as shown, for the greatest bass impact.

An alternative connection method without using Y cables is shown on the next page.

If your preamp/receiver has a dedicated sub/LFE output,
then only one input is used as shown on the previous page.



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Using the Line-Level Outputs

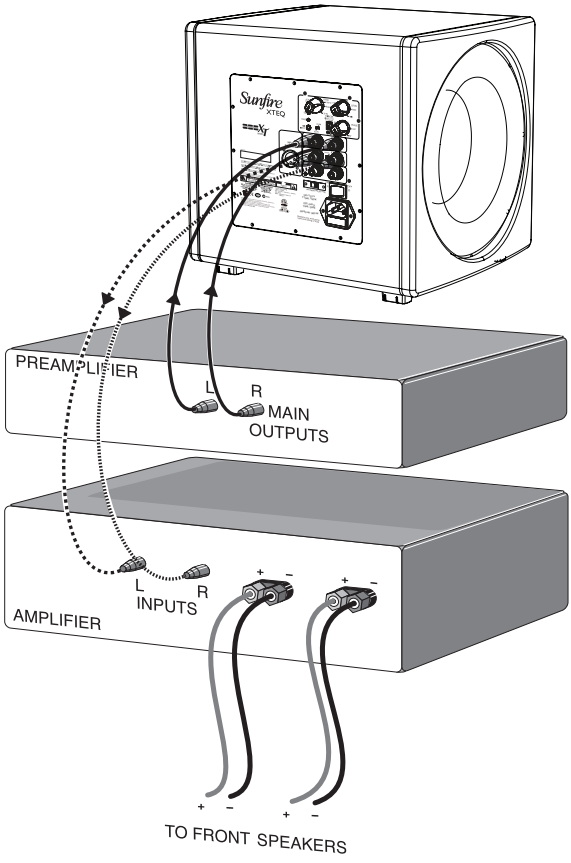
If you are using a preamplifier that does not have a sub/LFE output, you can send its left and right front output into the subwoofer's line-level inputs and then connect the subwoofer's line-level outputs to the inputs of your amplifier.

The subwoofer will play the low frequencies and your amplifier and front speakers will play the frequency range of the subwoofer's outputs.

The subwoofer's output switch lets you select BYPASS or 85 Hz.

In the 85 Hz position, the signals coming out of the subwoofer's outputs are a copy of the signals going into the subwoofer, except that the low bass is filtered out. This uses the subwoofer's passive crossover network, rather than the active network and controls. This is an excellent method if your front speakers are small satellites or mini-monitors, and/or your power amplifier is of limited power, such as a tube amp.

If the switch is set to BYPASS, then the amplifier and speakers receive the full frequency range. This is a good position if your speakers are capable of good low frequency performance.



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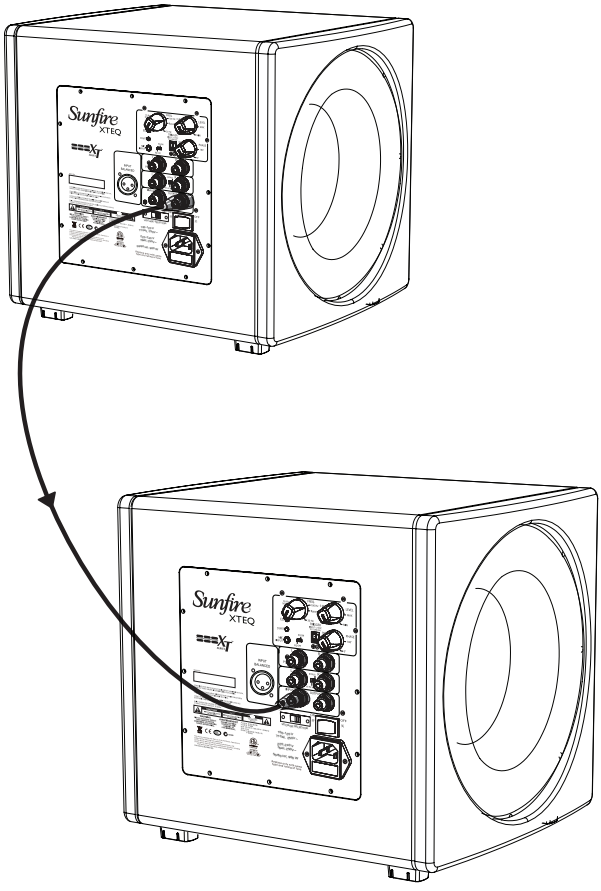
Using the Slave Input and Output

The SLAVE output from one XTEQ subwoofer can be connected to the SLAVE input of a second XTEQ subwoofer. The second subwoofer will then receive the optimum audio signals from the first.

There is no need to adjust the controls of the second subwoofer, as the audio is controlled by the controls and EQ setting of the first. The second subwoofer does not require any connections to its line-level inputs.

Before the EQ procedure, make sure that both XTEQ subwoofers are connected together as shown. The microphone should be connected to the first subwoofer. The automatic EQ procedure will take into account the effect of both subwoofers as they play in the room.



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Specifications

MODEL	XTEQ8	XTEQ10	XTEQ12
Driver Complement	8” Active Side Firing Driver 8” Side Firing Passive Radiator	10” Active Side Firing Driver 10” Side Firing Passive Radiator	12” Active Side Firing Driver 12” Side Firing Passive Radiator
Amplifier Power	1,800 Watt Tracking Down Converter	2,700 Watt Tracking Down Converter	3,000 Watt Tracking Down Converter
Frequency Response	22Hz – 100Hz	18Hz – 100Hz	16Hz – 100Hz
THD	Less than 3% typical operation	Less than 3% typical operation	Less than 3% typical operation
High Pass Crossover	85Hz	85Hz	85Hz
Low Pass Crossover	30Hz	30Hz	30Hz
Phase	0 to 180 degree (variable)	0 to 180 degree (variable)	0 to 180 degree (variable)
Woofer Magnet	6.3” x 2.75” Deep 143 oz.	7.5” x 3.5” Deep 194 oz.	7.5” x 3.5” deep 194 oz.
Voice Coil	2”	3”	3”
Cone Material	Non-pressed paper with a high density foam edge	Non-pressed paper with a high density foam edge	Non-pressed paper with a high density foam edge
INPUTS			
Line Level (L&R)	Line Level (RCA) Nominal Impedance 15k Ω	Line Level (RCA) Nominal Impedance 15k Ω	Line Level (RCA) Nominal Impedance 15k Ω
Input (Mono)	Balanced (XLR) Nominal Impedance 14k Ω	Balanced (XLR) Nominal Impedance 14k Ω	Balanced (XLR) Nominal Impedance 14k Ω
Slave	Line Level - Mono (RCA) Nominal Impedance 8k Ω	Line Level - Mono (RCA) Nominal Impedance 8k Ω	Line Level - Mono (RCA) Nominal Impedance 8k Ω
Microphone 3.5 mm (condense mic incl.)	3.5mm (Microphone included)	3.5mm (Microphone included)	3.5mm (Microphone included)
Trigger On (use ATMOS spee)	12 VDC	12 VDC	12 VDC
OUTPUTS			
Thru (L&R)	Line Level (RCA) 85Hz High Pass Filter / Bypass - selectable	Line Level (RCA) 85Hz High Pass Filter / Bypass - selectable	Line Level (RCA) 85Hz High Pass Filter / Bypass - selectable
Slave	Line Level – Mono (RCA) Nominal Impedance 120k Ω	Line Level – Mono (RCA) Nominal Impedance 120k Ω	Line Level – Mono (RCA) Nominal Impedance 120k Ω
GENERAL			
Finish	High Gloss Black	High Gloss Black	High Gloss Black
Included Accessories	Microphone and Power Cord	Microphone and Power Cord	Microphone and Power Cord
Dimensions (H/W/D) - Net	9" x 9" x 9"	11" x 11" x 11.25"	13" x 13" x 12.25"
Weight Net	29 Lbs.	55 Lbs.	60 Lbs.
Power	100-120 / 220-240 V~, 50/60Hz, 900W	100-120 / 220-240 V~, 50/60Hz, 900W	100-120 / 220-240 V~, 50/60Hz, 900W

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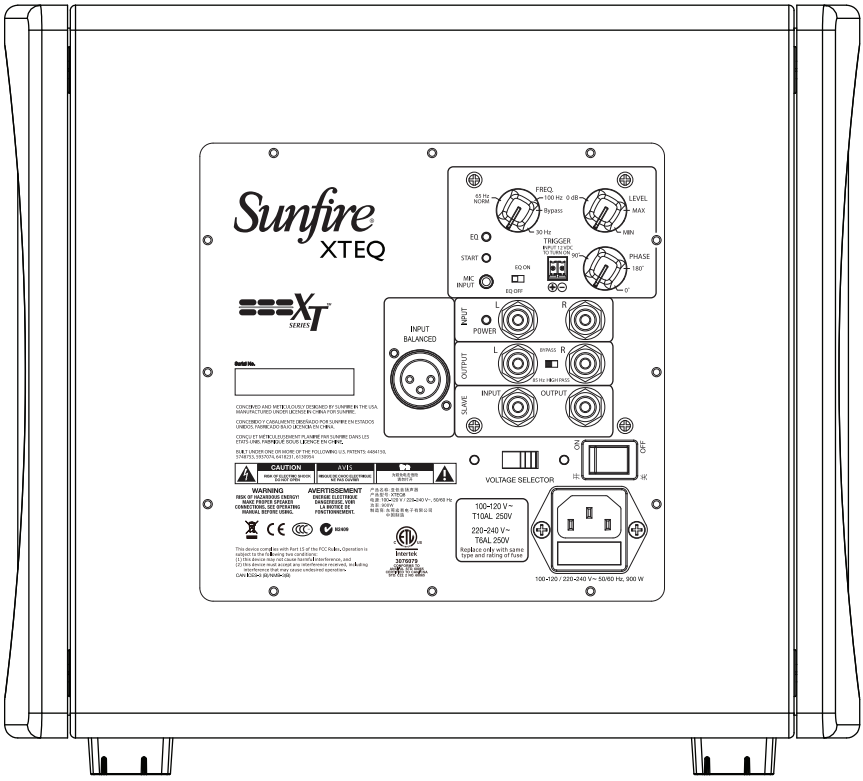

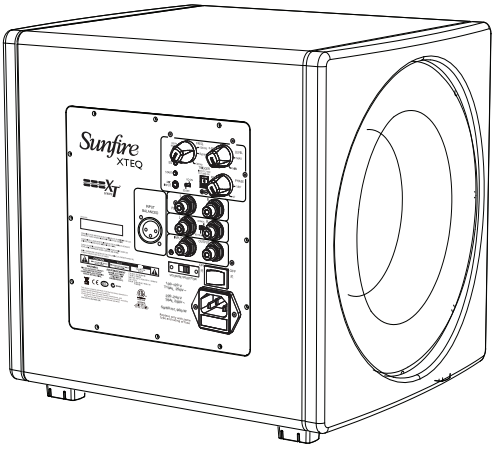

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Troubleshooting

The Sunfire Subwoofer is expertly designed and built to provide years of trouble-free performance. Most problems that occur can usually be solved by checking your setup or making sure that the components connected to the amplifier are on and fully operational.

The following information will help you deal with common problems you may experience during normal use. If a problem still persists, please contact your Sunfire Dealer for assistance.

Not Enough Bass

- Check that your preamplifier's outputs are connected to the subwoofer's line-level inputs and not to the line-level outputs. If they are connected to the outputs by mistake, the bass will be weak but the subwoofer will still function.
- If your preamplifier has a single subwoofer/LFE output jack, try using a "Y" cable to connect it to the left and right inputs.
- Make certain the subwoofer is in a corner location, firing at 45 degrees into the walls formed by the corner. This is not absolutely essential, but will maximize the bass output and give the smoothest possible response. If you place the unit so one of the drivers is firing into one of the walls, leave three inches of clearance between the driver and the wall.
- Home Theater preamplifiers usually have a way of adjusting the level of the subwoofer/LFE output, either using a remote control or with a small volume knob on the back panel. Make sure that this is adjusted correctly.
- Check that your preamplifier or receiver's sub output is turned on. Some systems only have a sub output signal when the front speakers are set to "small."
- If the preamplifier's subwoofer/LFE output has an adjustable crossover frequency, make sure that the Sunfire subwoofer's own crossover point is set higher or part of the bass range will be missing.

Not Enough Bass in a 5.1 System

- 5.1 Home Theater preamplifiers usually have a bass management system which allows the bass to be redirected among your speakers. For example, the bass normally present in the front speakers can be redirected to play in the subwoofer, or the subwoofer can play the bass from all the speakers, in addition to its dedicated LFE (low frequency effects) channel. Make sure that all of the bass management options are correctly set. The preamplifier may have a way of turning the subwoofer output off entirely, so check that it is always on.
- Check that the preamplifier calibration procedure is correctly adjusted. Usually, the preamp will send a test tone through all the speakers in your system, allowing you to adjust (trim) the volume of each channel until they are all playing at the same level.
- If the bass is weak only when playing 5.1 surround sources, check that your preamplifier is correctly set to decode the 5.1 surround modes, such as Dolby Digital or DTS.
- DVD & Blu-ray discs have a menu which allows you to select which soundtrack to play. Check that the correct 5.1 surround audio soundtrack is selected, otherwise it may just play stereo into your preamp and you won't get the true LFE signal into the subwoofer.

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Hum

Adding any component such as a subwoofer to an existing system will often give rise to a hum which wasn't there before. Your first thought may be that the subwoofer has a problem, but this is more than likely caused by a "ground-loop" in your system.

Follow these steps to isolate the main cause of the ground-loop hum (there may even be more than one cause).

- Try to have all of your equipment on the same electrical outlet or circuit, see page 9 for more details.
- If your subwoofer is a fair distance away from your other equipment, you may use a 15 amp extension cord as long as it has a ground connection.

NOTE: Never remove the ground pin from any power cords. This is very dangerous.

- Turn off all components in your system, including the subwoofer, amplifiers and the preamplifier, before disconnecting or connecting cables.
- First remove every connection from the subwoofer to the rest of your system. Plug the subwoofer power cord back in and check for the hum. If it is still there, try plugging it into a different outlet in case it is picking up interference on the AC line.
- If you have followed the above guidelines for the power connections and a hum is still present, then there is one very common problem to consider: a "ground-loop" introduced by connecting a cable TV line to a DVD or Blu-ray player, which is then connected to the preamp. This can be addressed as follows:
- Disconnect all cables which come from outside the room, such as cable TV, satellite TV, or roof top antennas. Make sure that they are disconnected where they first enter the room, so they are making no connection to your preamplifier, TV, or any other component. If the hum is caused by the cable TV line, then you will need a "ground-loop isolator." This is an inexpensive device fitted in line with the coaxial cable feed.
- If the hum persists, disconnect all the source components one at a time from the back of the preamplifier until you identify the problem.
- Ground-loop isolators are available for audio lines and video. Once you have identified which components are causing a problem, you can fit the isolators between the component and the preamplifier.

No Auto Turn-off

The subwoofer should go into standby mode after approximately fifteen minutes with no audio signal present. If not, check there is no background hum. The subwoofer may sense hum as a small signal and stay on. See the above hints to eliminate the hum.

No Auto Turn-on

The subwoofer should turn on (come out of standby mode) when an audio signal is applied, or 12 VDC is applied to the Trigger inputs, or if the Start button is pressed. If it does not then, check the following:

- Check that the subwoofer power switch is on.
- The subwoofer's volume control may be turned down, or no signal is received from your preamplifier.
- Check the input connections.
- Check the mode switch or menu on surround systems to be certain that a bass signal is being sent to the subwoofer.
- Use the 12V Trigger for the most reliable on/off operation.

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Limited Warranty

Core Brands, LLC (“Core Brands”) warrants to the original retail purchaser only that this SUNFIRE XTEQ will be free of manufacturing defects in material and workmanship for the following period and subject to the limitations and exclusions set forth below:

Five years from the date of purchase

This warranty is not transferable to subsequent purchasers of the product. To obtain warranty service, contact the authorized dealer where you purchased your product or take the unit to the nearest authorized SUNFIRE dealer (with proof of purchase – claims made without proof of purchase will be denied) who will test the product and if necessary, forward it to Core Brands for service. If there are no authorized SUNFIRE dealers in your area, you must contact Core Brands to receive a factory Return Authorization Number.

DO NOT RETURN ANY UNIT WITHOUT FIRST RECEIVING WRITTEN AUTHORIZATION AND SHIPPING INSTRUCTIONS FROM CORE BRANDS.

Upon examination, Core Brands will, at its sole option and expense, repair or replace any product found to be defective. Core Brands will return the repaired or replaced unit to you via its usual shipping method from the factory to your address in the United States of America or Canada only. Any shipping costs for addresses outside of the United States or Canada shall be the responsibility of the purchaser. In the event that this model is no longer available and cannot be repaired effectively, Core Brands, at its sole option, may replace it with a different model of equal or greater value, or refund the original purchase price paid. THE FOREGOING ARE YOUR EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY.

This Warranty does not include service or parts to repair damage caused by improper use or handling, including but not limited to damage caused by accident, mishandling, improper installation, commercial use, abuse, negligence, or normal wear and tear, or any defect caused by repair to the product by anyone other than Core Brands.

This warranty does not cover reimbursement for your costs of removing and transporting the product for warranty service evaluation, or installation of any replacement product provided under this warranty.

This Warranty will be void if:

The Serial Number on the product has been removed, tampered with or defaced.

The product was not purchased from an authorized dealer or reseller.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES.

CORE BRANDS EXPRESSLY DISCLAIMS ALL SUCH OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PAR TICULAR PURPOSE AND NON-INFRINGEMENT, WITH RESPECT TO THE PRODUCT.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, CORE BRANDS SHALL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES EXCEPT TO THE EXTENT PROVIDED (OR PROHIBITED) BYAPPLICABLE LAW, EVEN IF CORE BRANDS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

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Notwithstanding the above, if you qualify as a “consumer” under the Magnuson-Moss Warranty Act, or applicable state laws, then you may be entitled to any implied warranties allowed by law for the Warranty Period. Further, some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of consequential damages, so such limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Model _____

Serial No. _____
_____

Purchase Date _____

Service Assistance

For the name of your nearest authorized SUNFIRE dealer, contact:
Core Brands, LLC.
1800 South McDowell Blvd
Petaluma, CA 94954

1-800-472-5555,

1-707-778-5733

or

www.sunfire.com

Please be advised that Core Brands only sells its products via the Internet through a select group of authorized Internet dealers. These are listed on our website at www.sunfire.com. Products offered on the Internet through unauthorized Internet dealers are not covered by the SUNFIRE / Core Brands warranty and may be either:

1. Goods acquired on a secondary or grey market
2. Counterfeit or stolen goods
3. Damaged, or defective goods

Please fill in your product information and retain for your records.

ATTENTION:

TO OUR VALUED CONSUMERS:

To insure that consumers obtain quality pre-sale and after-sale support and service, SUNFIRE products are sold exclusively through authorized dealers. This warranty is VOID if the products have been purchased from an unauthorized dealer.

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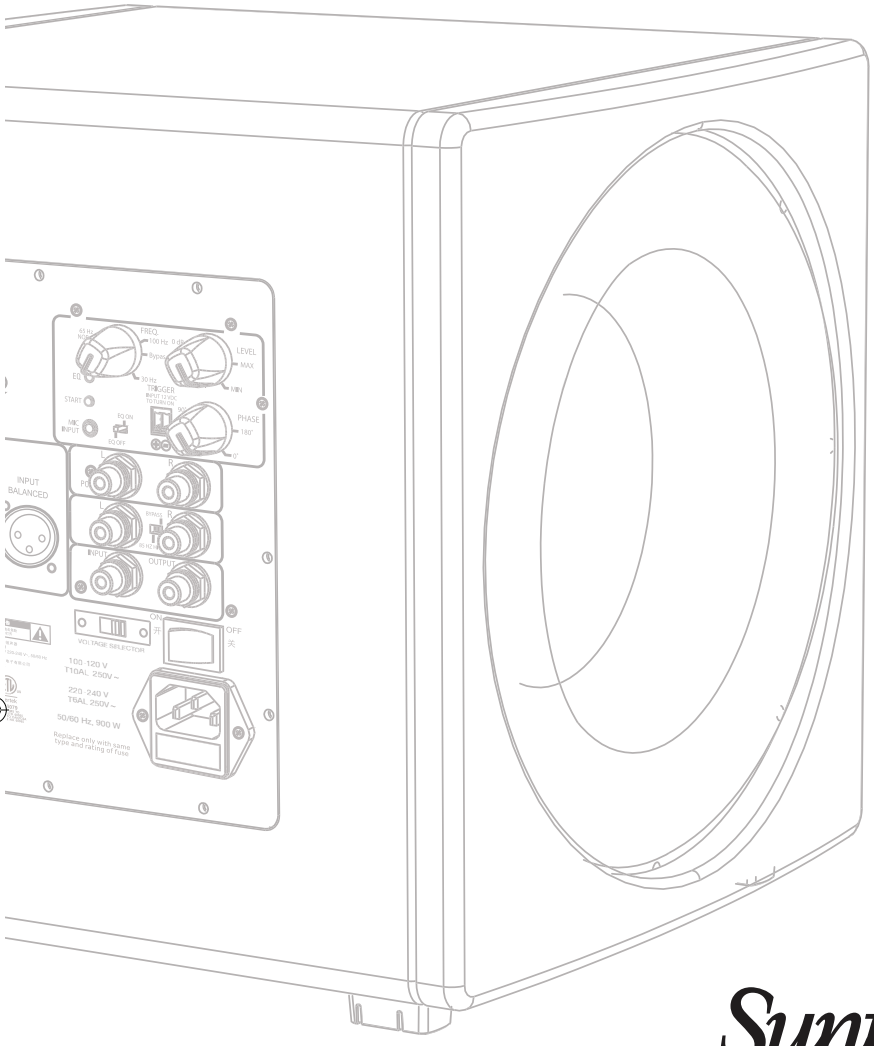

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